

Work Order ID 128298

Wednesday, January 14, 2015 10:57:09 AM

128298

Page 1

Item ID: D3163-042

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cover Assembly

Start Date: 1/19/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/19/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: C2 Date: 15/01/14 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3163	Rev E

100	Small Fab	0.00							
100									
Small Fab	Memo	0.00							
Small Fab	Rivet D3163-3 to D3163-1 Ensure holes line up								

110	QC5- Inspect part completeness to step on W/O	0.00							
110									
QC	Memo	0.00							
Quality Control									

120	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
120									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <u>3:05</u> OVEN TEMPERATURE: <u>300°</u> FINISH TIME: <u>3:35</u>								

2 FF FEB 10 2015

(2) DAS 38 9-89

FEB 11 2015

2 φ 152-11. 238

Pro

DQA:

Date:

15/05/05



QA Closed:

Date:

15/04/30

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>128298</u>	DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. <u>D 3163-042</u>	Rework ☒	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☒	
NCR No. <u>15-4833</u>	Scrap ☐	Machining ☐	Small Fab ☒	Prod. Eng. Coord. ☐	Quality ☐	
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	15/2/17	140	2	MS20426 AD3-S Rivets too long	DAS 12 9-89	Acceptable to we shorter	FF. 15/02/15	25 15-02-11	DAS 9 9-89
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General		
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☒ BOM/Route	☐ Grain	☐ Pressure/Forced
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Over/Under tolerance
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Incorrect
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Part Moved
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Positioned Wrong
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread	☐ Power Loss/Surge
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	☐ Other
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence	

Work Order ID 128298

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128298

Page 2

Item ID: D3163-042

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Cover Assembly

Start Date: 1/19/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/19/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC3- Inspect Part Finish

0.00

130

QC

Memo

0.00

Quality Control

DAS
38
9-89

FEB 17 2015

140

Small Fab

0.00

140

Small Fab

Memo

0.00

Small Fab

Install Nut Plates as per Dwg D3163

2

FF

FEB 17 2015

PO First page

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

DAS
38
9-89

FEB 17 2015

Work Order ID 128298

Wednesday, January 14, 2015 10:57:09 AM

128298

Page 3

Item ID:	D3163-042	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Cover Assembly					
Start Date:	1/19/2015	Start Qty: 2.00	*2*	Cust Item ID:		
Required Date:	1/19/2015	Req'd Qty: 2.00	*2*	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location CA2	0.00							
160									
Packaging	Memo	0.00				2		DAS 06 8-89	FEB 18 2015
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

15/2/18 **15**

Picklist Print

Wednesday, January 14, 2015 10:57:08 AM

Page 1

Work Order ID: 128298

128298

Parent Item: D3163-042

D3163-042

Parent Item Name: Cover Assembly

Start Date: 1/19/2015

Required Date: 1/19/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP A05.10.25 New issue KJ/RF
IPP Rev: B 06-07-03 As per Rev D JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3163-1		Manufactured	No			100	Each	2.0000	1	2			
D3163-1									**		FF	FEB 10 2015	
Plate													

Location

Loc Qty

Loc Code

ST196

2

101843

2

D3163-3RevD

Manufactured No

100

Each

0.0000

1

2

D3163-3RevD

Plate

MS20426AD3-4

Purchased No

100

Each

2,154.000

4

8

MS20426AD3-4

RIVET

**

FF

FEB 10 2015

Location

Loc Qty

Loc Code

GA

1736

m127432

1736

MF4

36

125578

36

ST313

382

125578

382

MS20426AD3-5

Purchased No

140

Each

5,837.000

4

8

MS20426AD3-5

Rivet

**

FF

FEB 10 2015

Location

Loc Qty

Loc Code

GA

4309

4533

4309

ST313

1528

4444

1528

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Wednesday, January 14, 2015 10:57:08 AM

Page 2

Work Order ID: 128298

128298

Parent Item: D3163-042

D3163-042

Parent Item Name: Cover Assembly

Start Date: 1/19/2015

Required Date: 1/19/2015

Start Qty: 2.00

Required Qty: 2.00

MS21059L08

Purchased

No

140

Each

200.0000

2

4

MS21059L 08

FF

FEB 10 2015

Nut

Location

Loc Qty

Loc Code

MF4

74

125654

74

ST302

126

m129934

126

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

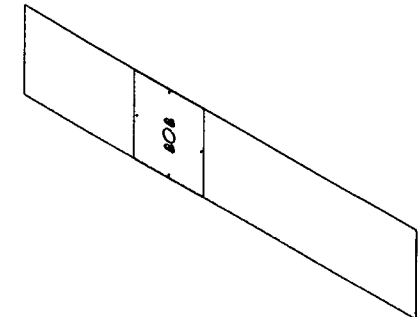
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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ITEM	QTY -041	P/N	DESCRIPTION
1	X	D3163-041	PLATE
2	1	D3163-1	PLATE
3	1	D3163-3	PLATE
4	4	MS20426AD3-4	RIVET
5	4	MS20426AD3-5	RIVET
6	2	MS21059L08	NUTPLATE



RELEASED
2009 -11- 09
MP

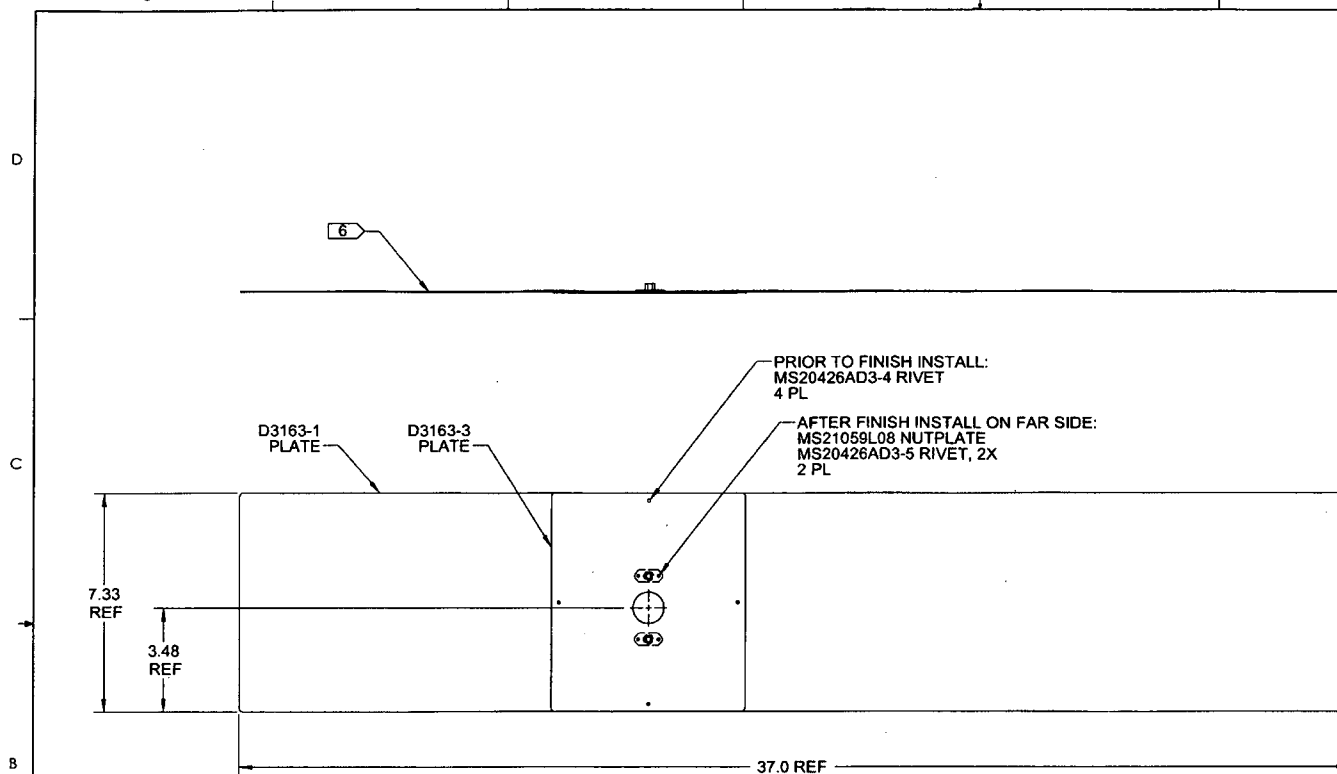
D3163-041 PLATE

CY15101114
W10.128288

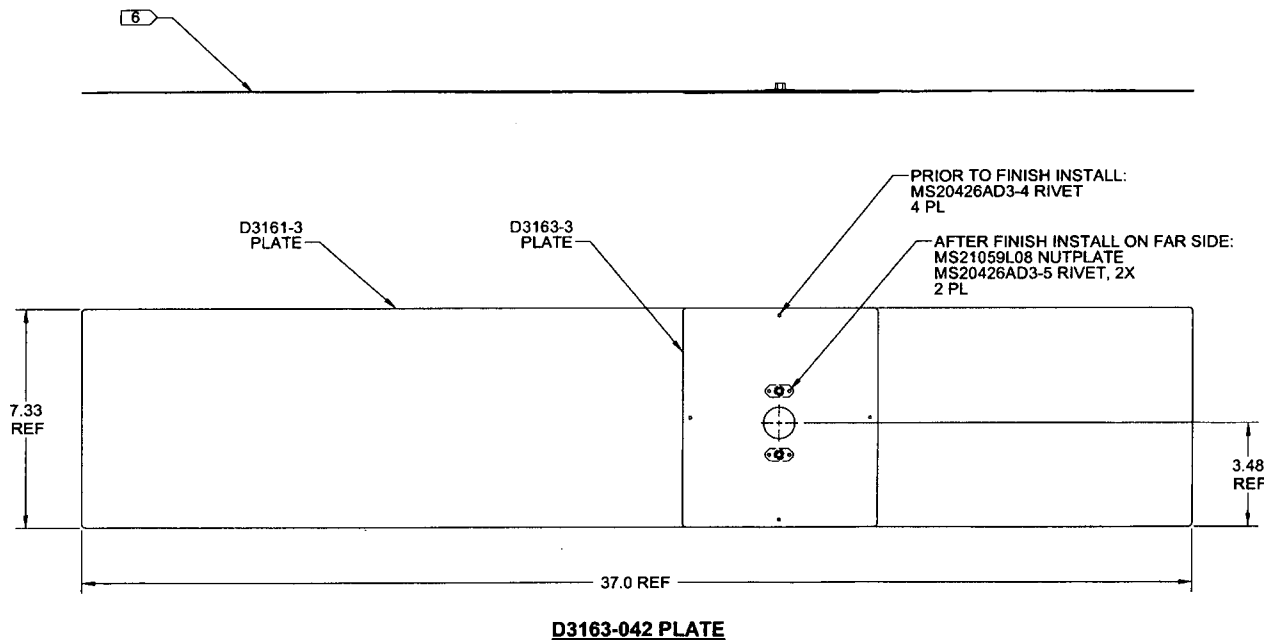
E	REDRAW, 13.69 WAS 12.81 (TYPO, ZN B6-3), NCR 09-095	CP	09.10.21
D	ADD 4 RIVETS, RMV ADHESIVE	CB	06.08.28
C	Ø 1.050 WAS Ø 1.000	RF	05.11.22
B	7.33 WAS 7.20, RMV PERIMETER HOLES	RF	04.10.06
A	NEW ISSUE	RF	02.04.26
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3163	SHEET 1 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PLATE	NTS
DATE	09.10.21	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3 AFTER ASSEMBLY OF D3163-3 PLATE
PRIOR TO INSTALLATION OF MS21059L08 NUTPLATES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3163-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.00 lbs



ITEM	QTY	P/N	DESCRIPTION
1	X	D3163-042	PLATE
2	1	D3163-1	PLATE
3	1	D3163-3	PLATE
4	4	MS20426AD3-4	RIVET
5	4	MS20426AD3-5	RIVET
6	2	MS21059L08	NUTPLATE



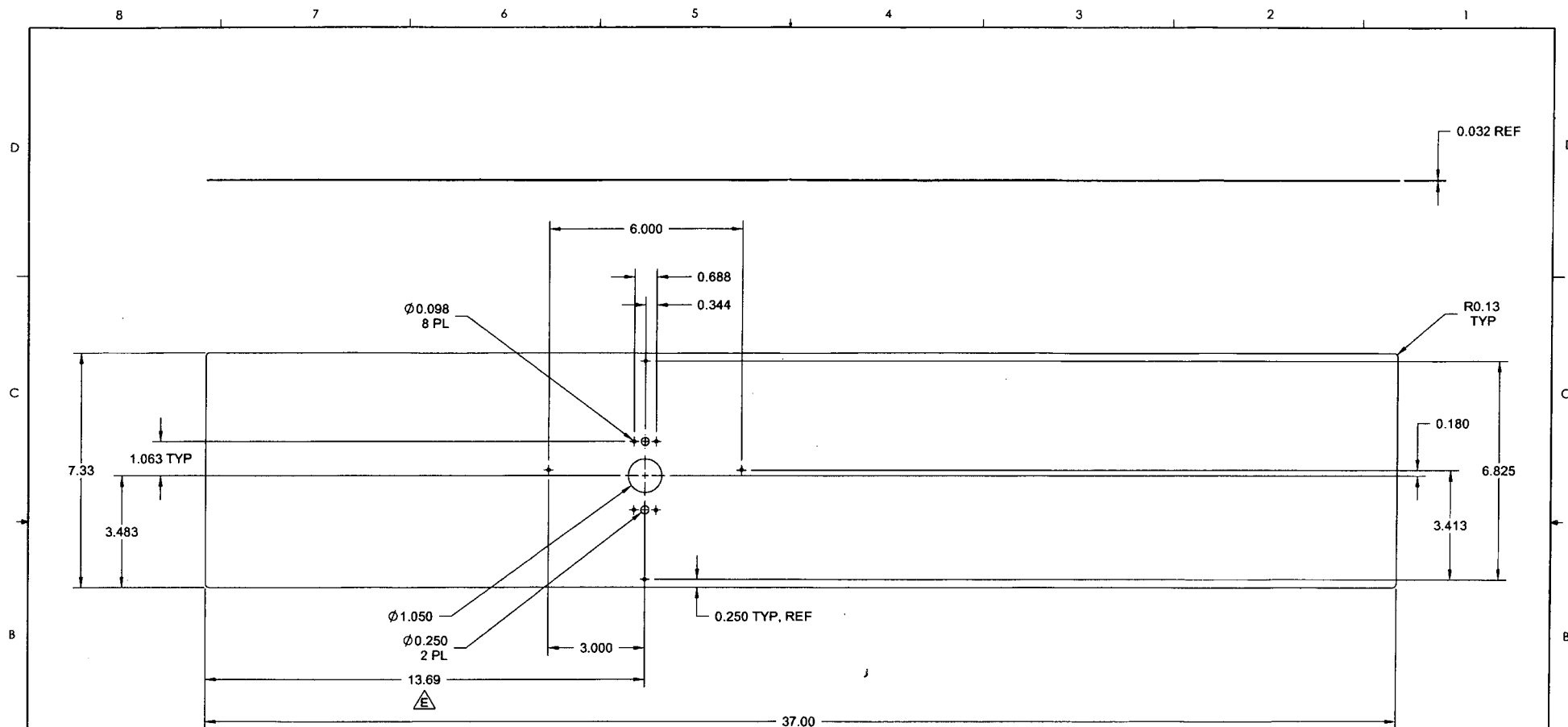
D3163-042 PLATE

RELEASED
2009-11-09
AWD

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT GREY SANDEX (4.3.5.6) PER DART QSI 005 4.3 AFTER ASSEMBLY OF D3163-3 PLATE
PRIOR TO INSTALLATION OF MS21059L08 NUTPLATES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3163-042" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.00 lbs

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3163	SHEET 2 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PLATE	NTS
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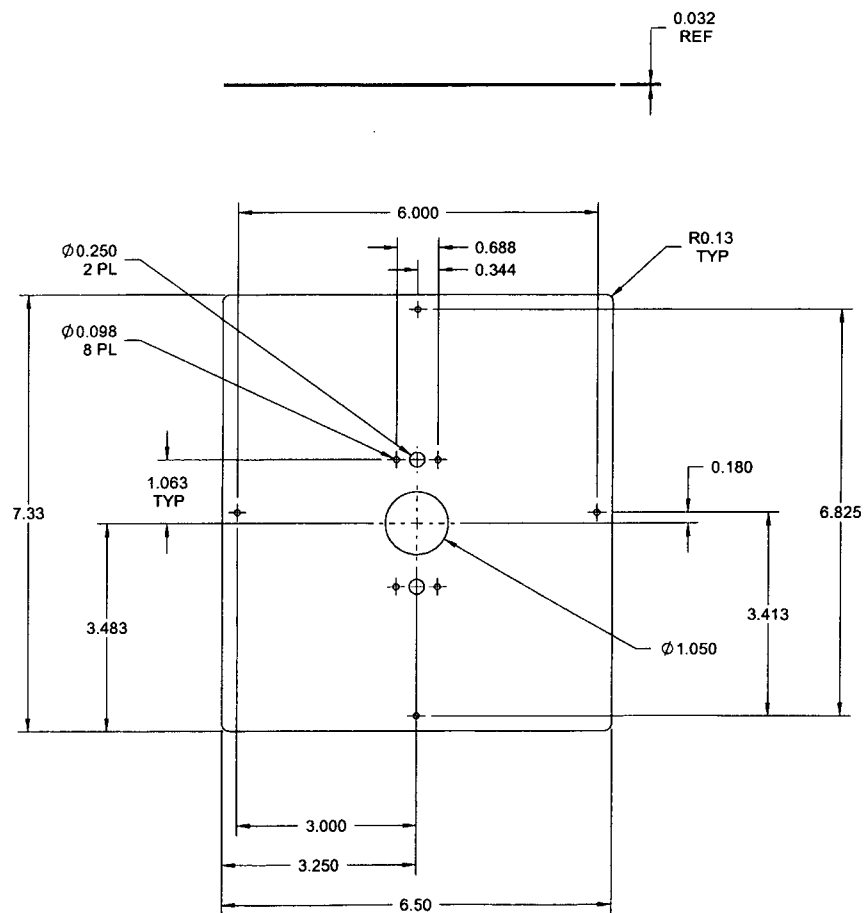
D3163-1 PLATE

RELEASED
2009-11-09

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET 0.032 THICK PER QQ-A-250/4, REF DART SPEC. M2024T3S.032
OR 6061-T6 ALUMINUM SHEET 0.032 THICK PER QQ-A-250/11, REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3163-1" USING REMOVABLE TAG
- 7) WEIGHT: 0.84 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3163	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		PLATE	NTS
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RELEASED
2009-11-09
MP

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET 0.032 THICK PER QQ-A-250/4, REF DART SPEC. M2024T3S.032
OR 6061-T6 ALUMINUM SHEET 0.032 THICK PER QQ-A-250/11, REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3163-3" USING REMOVABLE TAG
- 7) WEIGHT: 0.15 lbs

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3163	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	PLATE	NTS
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